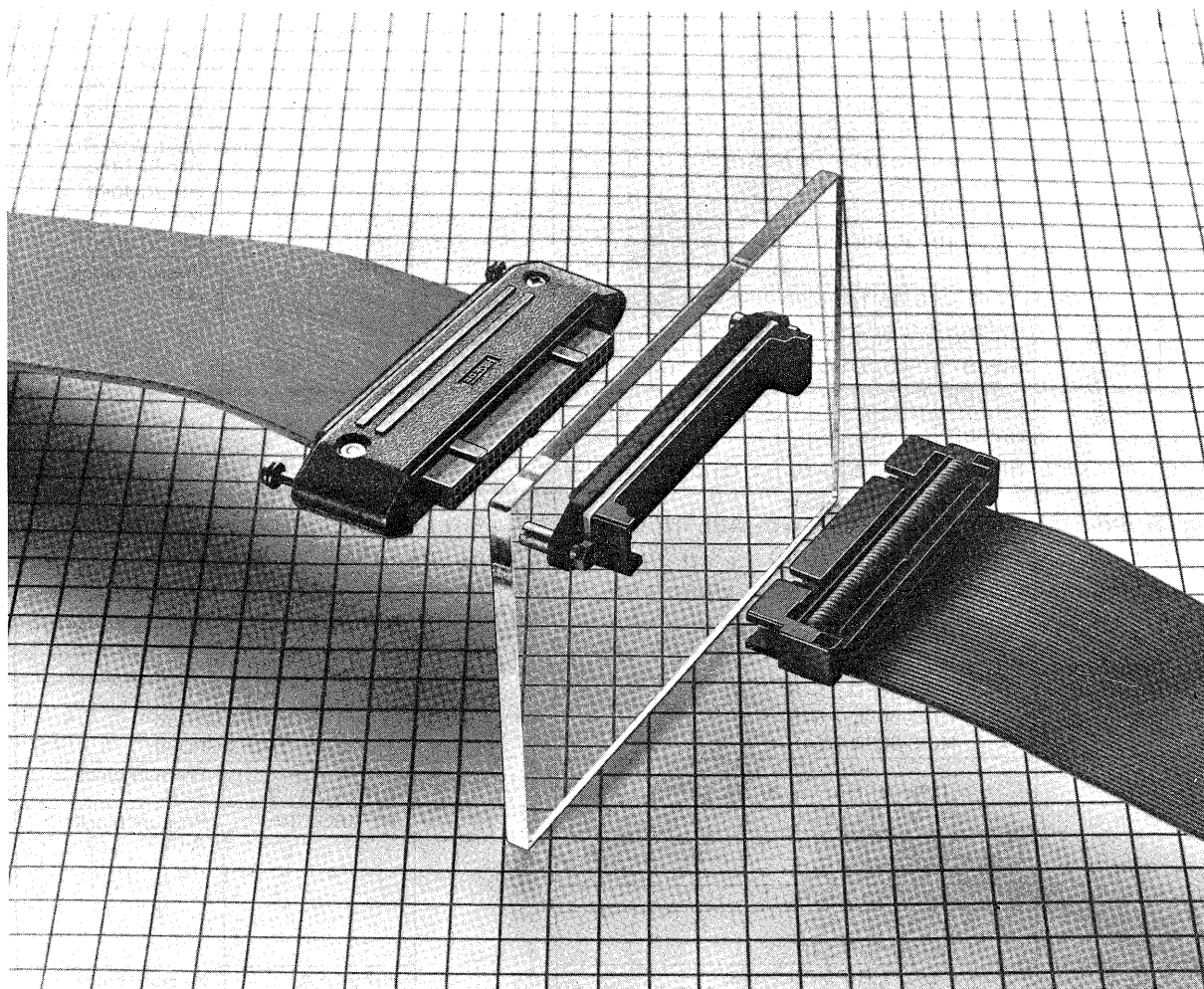


**General**

Hirose has already put on the market many types of Hi-Flex series connectors, HIF1, HIF2, HIF3, HIF4 and HIF5 which are designed for INSIDE, PCB connection in an equipment. In addition to above, we introduce Series QF1

ribbon cable connector which is designed for OUTSIDE connection through chassis mounting in/out of an equipment. Jacketed cable (1.7 – 2.0 mm thick) is prepared for this purpose.



## Material and Finish

|                         |  |
|-------------------------|--|
| Molding & Strain Relief | : Glass-reinforced Polyester, UL94V-0, Black |
| Contact                 | : Beryllium Copper, Gold plated over Nickel  |
| Plug Shell & Bracket    | : ABS resin, Black                           |

## Electrical and Environmental Characteristics

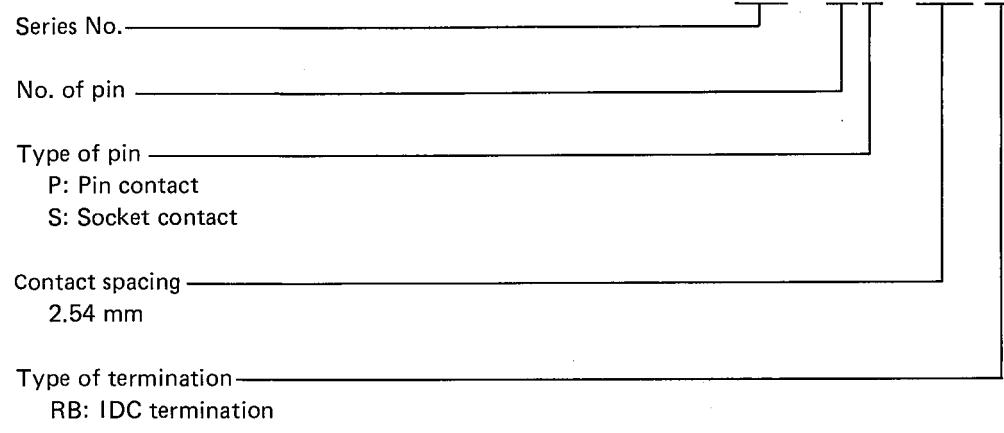
|                              |  |
|------------------------------|--|
| Current Rating               | : 1A   |
| Voltage Rating               | : AC200V, DC280V   |
| Withstand Voltage            | : AC650V for a minute  |
| Insulation Resistance        | : MIN 1000M $\Omega$ at DC500V   |
| Contact Resistance           | : MAX 20m $\Omega$ at DC100mA  |
| Insertion & Extraction Force | : 40–300 grs/pin and MAX 15 kgs/Connector  |
| Humidity                     | : MIL-STD-202, Insulation Resistance MIN 1000M $\Omega$ at DC500V at 40°C, 90–95%, and for 96 hours  |
| Vibration                    | : MIL-STD-202, No visual damage nor current break more than 1 micro second at DC 100mA at 10–55Hz with 1.5mm amplitude in 3 directions for 2 hours |
| Shock                        | : MIL-STD-202, No visual damage nor current break more than 1 micro second at 100mA in 3 directions at 50G   |
| Temperature Cycling          | : MIL-STD-202, -55 to +85°C with cable   |
| Durability                   | : Contact Resistance MAX 20m $\Omega$ at 100mA after 500 time insertion and extraction   |
| Salt Spray                   | : MIL-STD-202, No heavy corrosion and Contact Resistance MAX 20m $\Omega$ at DC100mA at 5%, 35°C salt water spray for 48 hours                     |
| H <sub>2</sub> S Gas         | : No heavy corrosion and Contact Resistance MAX 20m $\Omega$ at 100mA after setting in 3ppm, 40°C H <sub>2</sub> S Gas for 120 hours               |
| Dry Circuit                  | : MIL-STD-1344-3002, Contact Resistance MAX 20m $\Omega$ at DC1mA  |

# Ordering Information

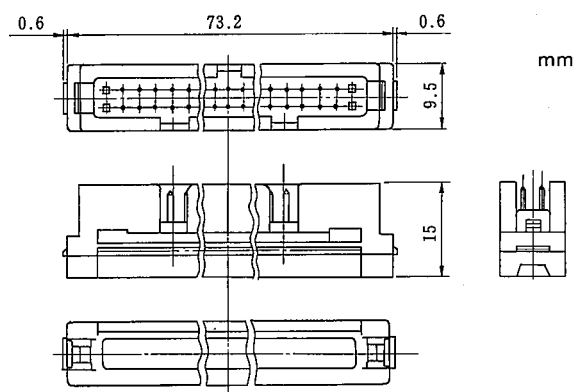
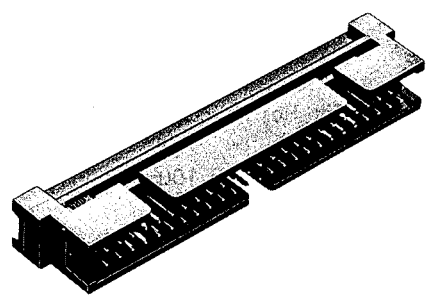
QF1

## Insert

QF1 - 50 P - 2.54 RB

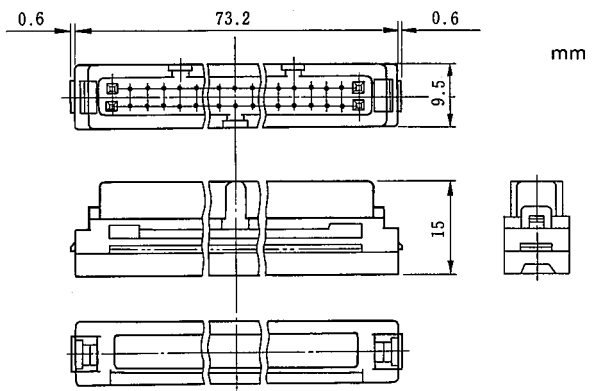
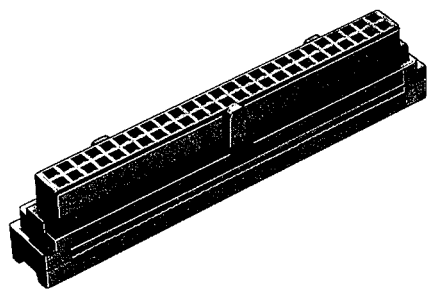


## Pin Insert



| No. of pin | Part No.       |
|------------|----------------|
| 50         | QF1-50P-2.54RB |

## Socket Insert



| No. of pin | Part No.       |
|------------|----------------|
| 50         | QF1-50S-2.54RB |

QF1

Ordering Information

• Accessory

QF1 - 50 SR1

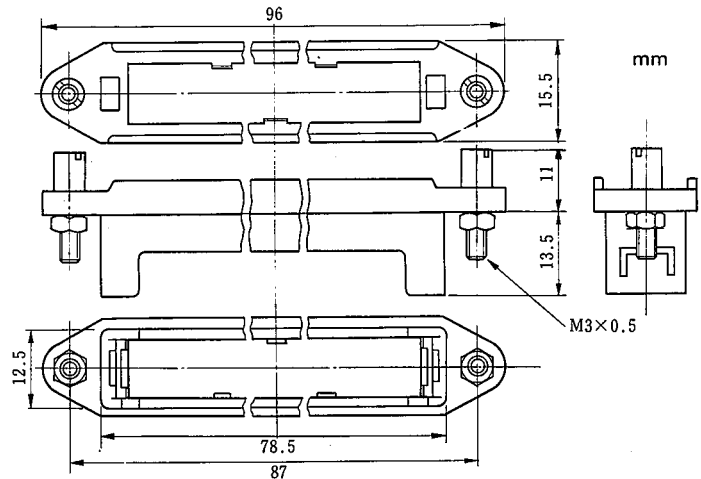
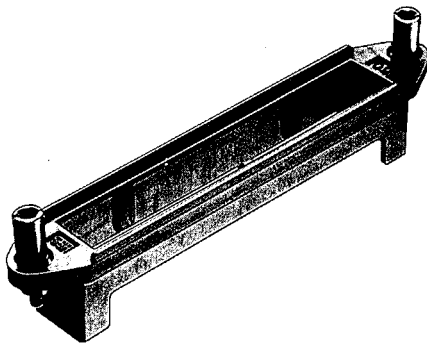
Series No. \_\_\_\_\_

No. of pin \_\_\_\_\_

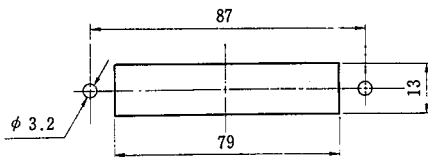
Type of accessory \_\_\_\_\_

SR1: Strain relief  
BR1: Bracket  
CV1: Plug shell

Bracket

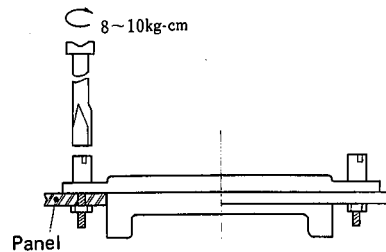


Mounting Hole



Mounting

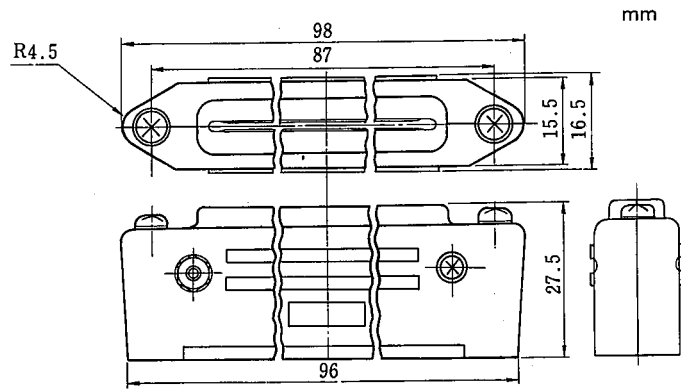
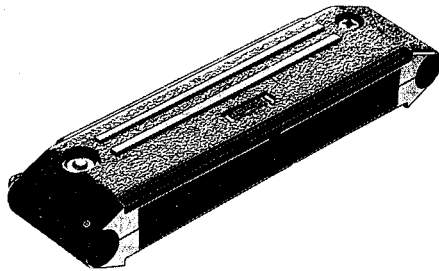
| No. of pin | Part No.  |
|------------|-----------|
| 50         | QF1-50BR1 |



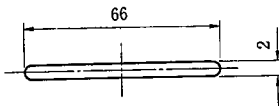
1. Bracket shall be mounted on chassis with attached lock screw and nut.
2. Refer to above sketch regarding mounting hole size on chassis and how to mount bracket.
3. If the chassis is thicker than 3.5 mm, tap internal threads (M3x0.5) in chassis.
4. Be cautious to the mounting direction due to polarizing key way.

5. Once either pin insert or socket insert is installed in a bracket, it is not preferable to remove it. If it is expected to remove the insert frequently due to circuit change, or some maintenance requirement, please choose extractable connector at the other end of the cable.

Plug Shell

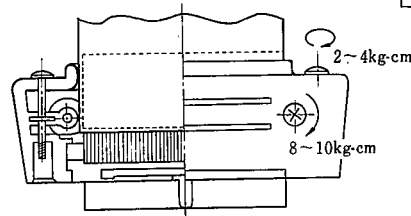


Cable Entry Hole



Assembling

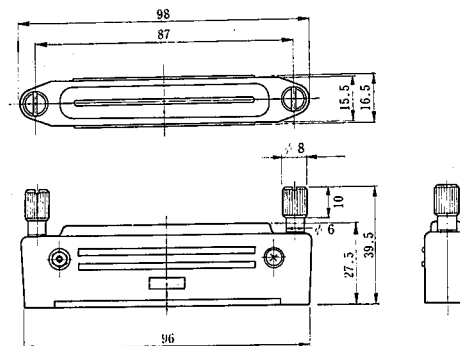
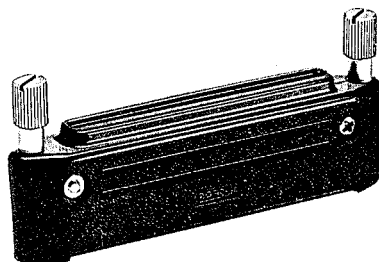
| No. of pin | Part No.  |
|------------|-----------|
| 50         | QF1-50CV1 |



1. Install pin insert or socket insert terminated with jacketed cable to plug shell and then assemble it with attached nut and screw (M3x0.5x14).
2. The cable entrance size and plug shell assembling is shown above.

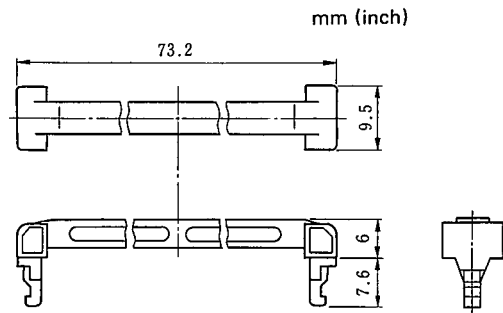
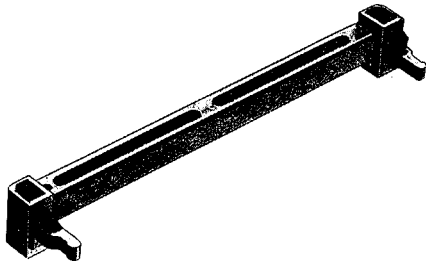
3. If general ribbon cable is used without jacket, please wrap insulation tape upto 1.7 - 2.0 mm thick to be clamped in this assembling.

Plug Shell



| No. of Pin | Part No.      |
|------------|---------------|
| 50         | QF1-50CV2(01) |

## Strain Relief



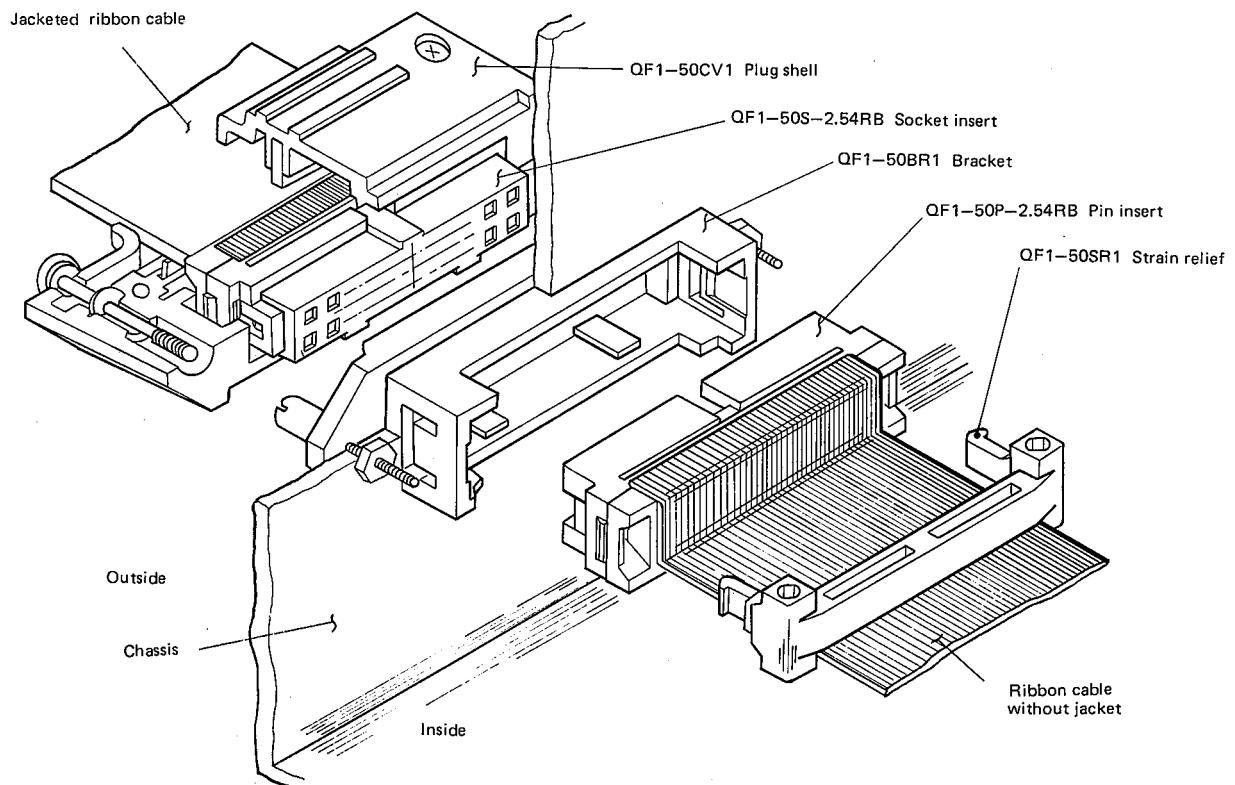
| No. of pin | Part No.  |
|------------|-----------|
| 50         | QF1-50SR1 |

Strain relief must be used for protection of insulation displacement part of the inside, bracket side connector from twist and tension of cable.

## QF1

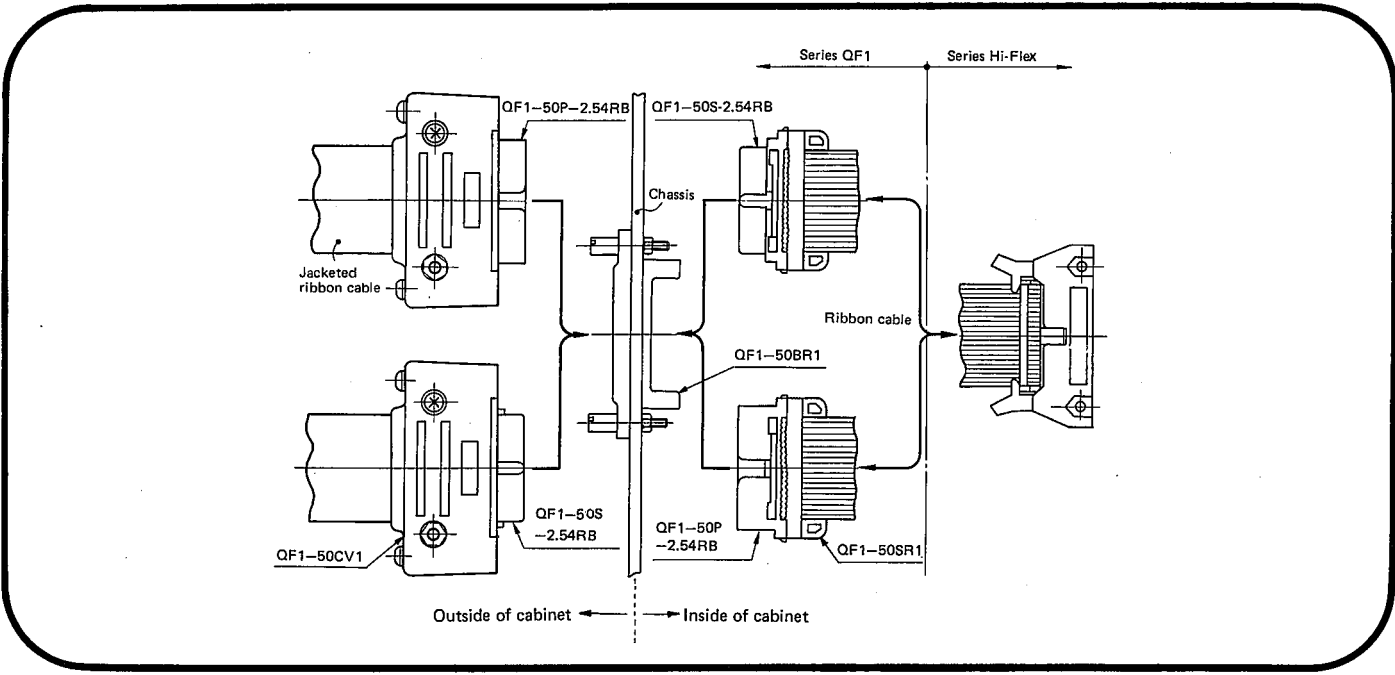
## How to Use Connector

Series QF1 connector is designed for connecting the circuit between outside and inside through chassis as shown below.



# Basic Connection Guide

QF1



## Tools

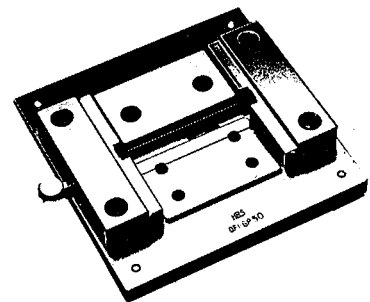
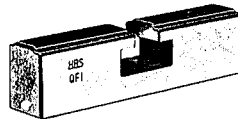
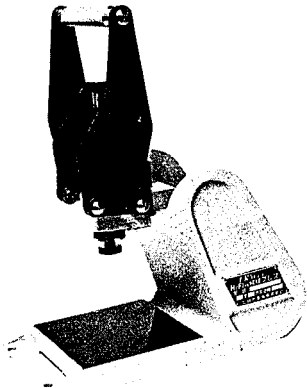
Press, pressure block, and guide plate are prepared for easy and reliable termination of series QF1 ribbon cable connectors. Press is common to Hi-Flex connecting press

but QF1 pressure block and QF1-GP50 guide plate are designed only for this series, so that they can not be used for other connectors.

**Press**

**Pressure Block**

**Guide Plate**



|          |                          |
|----------|--------------------------|
| Part No. | Hi-Flex Connecting Press |
|----------|--------------------------|

|          |                    |
|----------|--------------------|
| Part No. | QF1 Pressure Block |
|----------|--------------------|

|            |          |
|------------|----------|
| No. of pin | Part No. |
| 50         | QF1-GP50 |